REMARKS/ARGUMENTS

Claims 1-10 and 12 are pending and rejected in this application. Claims 11 and 13 were previously cancelled without prejudice or disclaimer. Claim 1 has been amended. Support for the amendment may be found at least in paragraphs [0025], [0027], [0055], [0056], [0057], [0059], [0060], and [0061] and equations 7, 8, 9, 13, 14 of the specification. No new matter has been added. Applicant reserves the right to pursue the subject matter of any cancelled claims in one or more continuing applications.

In view of foregoing amendments and following remarks, Applicant requests allowance of the application.

CLAIMS 1-10 AND 12 ARE STATUTORY

Claims 1-10 and 12 stand rejected under 35 U.S.C. § 101 for allegedly being directed to non-statutory subject matter. Independent claim 1 has been amended to recite a computer-implemented method claim that is tied to a particular apparatus, in this case, a plurality of computing devices and associated remote databases, all in communication via a network, in compliance with the "machine or transformation" test endorsed by the recent Federal Circuit decision *In re Bilski* for determining whether claimed subject matter is statutory under § 101.

Thus, Applicant respectfully submits independent claim 1 (and all claims that depend therefrom) is statutory. Withdrawal of the § 101 rejections of claims 1-10 and 12 is respectfully requested.

CLAIMS 1-10 AND 12 ARE SUPPORTED BY THE SPECIFICATION

Claims 1-10 and 12 stand rejected under 35 U.S.C. § 112, first paragraph, for allegedly lacking written description support in the specification. In light of the amendment to claim 1, Applicant respectfully submits the §112, first paragraph, rejection of claims 1-10 and 12 is moot. Claim 1, and by their dependency, claims 2-10 and 12 are supported by the specification. In particular, the subject matter of the amendments to claim 1 are clearly discussed at least in paragraph [0027] and equations 7, 8, 9, 13, and 14. Furthermore, the limitation "predetermined number" recited in claim 1 is disclosed in one non-limiting embodiment as the variable ε, which in one non-limiting embodiment may have a value of 10^{-6}, found on page 10

of the specification. Therefore, Applicant respectfully requests the § 112, first paragraph, rejection of claims 1-10 and 12 be withdrawn.

CLAIMS 1-10 AND 12 ARE DEFINITE

Claims 1-10 and 12 stand rejected under 35 U.S.C. § 112, second paragraph, as being allegedly indefinite with respect to the claim limitations "first equation" and "second equation". In light of the amendment to claim 1, Applicant respectfully submits the § 112, second paragraph, rejection of claims 1-10 and 12 is moot. Withdrawal of the § 112, second paragraph, rejection is respectfully requested.

CLAIMS 1-10 DEFINE OVER DATEY IN VIEW OF CASTELLACCI AND FURTHER IN VIEW OF KAMINSKY AND GERSHON

Claims 1-10 stand rejected under 35 U.S.C. § 103(a) as being allegedly rendered obvious over "The Performance of Analytical Approximations for the Computation of Asian Quanto-Basket Option Prices", written by Datey, Gauthier and Simonato in 2003 (hereinafter "Datey"), in view of "Asian basket spreads and other Exotic Averaging Options", written by Castellacci and Siclari in 2003 (hereinafter "Castellacci"), and further in view of U.S. Publication No. 2002/0082967 to Kaminsky et al. (hereinafter "Kaminsky") and U.S. Publication No. 2003/0208430to Gershon (hereinafter "Gershon").

Independent claim 1, as amended, recites in part:

calculating, using a processor, a first moment of a sum of spot values $S_j(t_i)$ of two or more underlyings of the basket using an equation given by

$\langle M \rangle = \frac{1}{N}\sum_{j=1}^{N_A} S(t_E)e^{g_j(t_{m+1}-t_E)}\Sigma_j$, where if $t_E<t_1$ then set m=0.;

. . .

wherein the variable Σ_j of the first moment of the sum of spot values equation **is represented by a first equation** given by $\Sigma_j = \frac{1-e^{g_j(N-m)h}}{1-e^{g_j h}}$, **if**

the absolute value of a value calculated using a riskless domestic interest rate and a dividend rate for the two or more underlyings and a time interval is greater than a predetermined number and wherein the **variable Σ_j** of the first moment of the sum of spot values equation **is**

represented by a second equation given by $\Sigma_j = \sum_{i=0}^{N-m-1} e^{g_{j,ki}}$ **if the absolute value of the value is less than or equal to the predetermined number**.

Datey in view of Castellacci and further in view of Kaminsky and Gershon fails to teach or suggest every element of amended independent claim 1, as is required to maintain a proper § 103(a) rejection. Datey does not teach the above-recited subject matter of claim 1. First, Datey discusses calculating the first four moments of the distribution of the arithmetic average of an underlying basket of options on p. 65 in the context of examining different analytical approximations. *See* Datey, pp. 65-66, equations (24), (25), (26), (27). However, none of these equations teaches or suggests the claimed equation for calculating a first moment of a sum of spot values $S_j(t_i)$ of two or more underlyings of an average spot basket option. Further, in each of these equations, Datey only discloses one fixed equation for calculating each respective moment of the sum of spot values. By providing two different equations for calculating the variable Σ_j of the first moment equation, variations in riskless domestic interest rate, dividend rate, and time interval can be accounted for when calculating the first moment equation. Thus, for at least these reasons Datey does not render claim 1 obvious under § 103(a).

Castellacci fails to remedy the deficiencies of Datey. Castellacci is only cited by the Office Action for allegedly teaching the application of a Black Scholes formalism to the first and second moments to determine the net present value of an average spot basket option. Office Action of April 8, 2009, p. 8. Nevertheless, a closer examination of Castellacci also shows that Castellacci fails to teach or suggest the claimed equation for calculating the first moment of a sum of spot values $S_j(t_i)$ of two or more underlyings of an average spot basket option. Further, because Castellacci only uses a single equation to calculate the first moment of a sum of spot values (*see* Castellacci, p. 2, equations (5) and (6) and p. 3, equations (17) and (19)), Castellacci also fails to teach or suggest each element of claim 1.

Kaminsky also does not remedy the deficiencies of Datey and Castellacci. Kaminsky is cited for allegedly teaching the use of a first equation if the absolute value of a value calculated is greater than a predetermined number and using a second equation if the absolute value of the value is less than or equal to the predetermined number. However, Kaminsky discusses modifying quotes if an aggregated risk is greater than a threshold value. This aggregated risk

is not determined from or related to riskless interest rates and dividend rates of the underlying assets of an average spot basket option or a time interval. Further, Kaminsky's quotes are not equations used to determine a value. Rather, Kaminsky clearly describes its quotes are orders to trade options. Kaminsky discusses modifying these quotes by either cancelling outstanding quotes, revising quotes by changing the quantity associated with the outstanding quotes or by increasing or decreasing bid and offer values of quotes, or regenerating just-filled quotes. *See* Kaminsky, paragraphs [0117]-[0121]. Finally, Kaminsky also does not teach or suggest the claimed equation for calculating the first moment of a sum of spot values $S_i(t_i)$ of two or more underlyings of an average spot basket option. Thus, for at least these reasons, Kaminsky does not make up for the deficiencies of Datey and Castellacci.

Finally, Gershon does not make up for the deficiencies of Datey, Castellacci, and Kaminsky. Gershon generally discusses the pricing of options. *See* Gershon, Abstract. Gershon however does not teach or suggest using one of two equations to represent a variable in the equation used to calculate calculating the first moment of a sum of spot values $S_i(t_i)$ of two or more underlyings of an average spot basket option, with the use of the equation dependent on the absolute value of a value calculated using a riskless interest rate and dividend rate for underlying assets of an average spot basket option and a time interval. Thus, for at least this reasons, Gershon does not remedy the deficiencies of Datey, Castellacci, and Kaminsky.

For at least the reasons mentioned above, claims 1-10 are allowable, and accordingly, Applicant respectfully requests the withdrawal of the rejection of claims 1-10 under 35 U.S.C § 103(a).

CLAIM 12 DEFINES OVER DATEY IN VIEW OF CASTELLACCI, KAMINSKY, AND GERSHON AND FURTHER IN VIEW OF OFFICIAL NOTICE

Claim 12 stands rejected under 35 U.S.C. § 103(a) as being allegedly rendered obvious over Davey in view of Castellacci in view of Kaminsky in view of Gershon as applied above and further in view of Official Notice.

As the Examiner's Official Notice is not related to the deficiencies noted above with respect to Datey, Castellacci, Kaminsky, and Gershon, claim 12 is allowable at least as an additional limitation of allowable independent claim 1. Accordingly, Applicant respectfully requests the withdrawal of the rejection of claim 12 under 35 U.S.C. § 103(a).

CONCLUSION

All outstanding rejections have been overcome. In view of the foregoing amendments and remarks, the application is in clear condition for allowance. Issuance of a Notice of Allowance is earnestly solicited.

Although not believed necessary, the Office is hereby authorized to charge any fees required under 37 C.F.R. § 1.16 or § 1.17 or credit any overpayments to Deposit Account No. **11-0600**.

The Office is invited to contact the undersigned at (408) 975-7500 to discuss any matter regarding this application.

Respectfully submitted,

KENYON & KENYON LLP

Date: July 8, 2009

/Mark D. Yuan/
Mark D. Yuan
(Registration No.: 57,312)

Kenyon & Kenyon LLP
333 West San Carlos Street, Suite 600
San Jose, CA 95110

Telephone: (408) 975-7500
Facsimile: (408) 975-7501